

Product Specification Sheet

**Bovine Serum Albumin Standard for BCA Test**

□ **Cat #** BCA-BSA-750      Pre-diluted BSA (bovine serum albumin) standard (750 ug/ml) for BCA Protein Test      **SIZE:** 1 ml

The Enhanced BCA Protein Assay measures total protein concentration using bicinchoninic acid (also known as the BCA assay or Smith assay). BCA is a biochemical assay for determining the total level of protein in a solution, similar to Lowry protein assay, Bradford protein assay or biuret reagent. The total protein concentration is exhibited by a color change of the sample solution from green to purple in proportion to protein concentration, which can then be measured using colorimetric techniques.

This method is based on the reduction of Cu<sup>+2</sup> to Cu<sup>+1</sup> by protein in an alkaline medium (the biuret reaction) with the highly sensitive and selective colorimetric detection of the cuprous cation (Cu<sup>+1</sup>) using a reagent containing bicinchoninic acid. The assay involves the chelation of two molecules of BCA with one cuprous ion. The bicinchoninic acid Cu<sup>+1</sup> complex is aided in protein samples by the presence of cysteine, cystine, tyrosine, and tryptophan side chains. At higher temperatures (37°C to 60°C), peptide bonds assist in the formation of the reaction product. Incubating the BCA assay at higher temperatures is recommended as a way to increase assay sensitivity while minimizing the variances caused by unequal amino acid composition.

This water-soluble protein complex exhibits a strong absorbance at 562 nm that is nearly linear with increasing protein concentrations over a broad working range (16-1,000 µg/ml). Protein concentrations generally are determined and reported with reference to standards of a common protein such as bovine serum albumin (BSA) or bovine gamma globulin (BGG). A series of dilutions of known concentration are pre-coated for the protein and assayed alongside the unknown(s) before the concentration of each unknown is determined based on the standard curve.

ADI's Enhanced BCA ELISA is a specific and sensitive assay for proteins. This kit is designed to measure protein concentration in purified proteins or cell or tissue extracts from mammalian (human, mouse, rat), plant or bacterial origin. The assay can be performed at either 37°C or ambient room temp (25-28°C).

**Source and Form**

BSA standards are prepared from highly purified bovine serum albumin protein and provided in PBS, pH 7.4 containing 0.1% azide as preservative. Store at 2-4°C for up to 1 year.

**#BCA-BSa-750**

1 vial of 1 ml at 750 ug/ml BSA.

**Suggested Use**

For ADI BCA protein Test or for other tests that require precise BSA standards.

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog#    ProdDescription

BCAB-110 BCA Enhanced Protein Assay kit (96 tests) with dual standards: 1 pre-coated bovine serum albumin (BSA) standard plate (0-20 ug/ml) & bovine gamma globulin (BGG) standard 1 mg/ml

BCAB-610 BCA Ultra Protein Assay kit (96 tests) with dual standards: 1 pre-coated bovine serum albumin (BSA) standard plate (0-12 ug/ml) & bovine gamma globulin (BGG) standard 1 mg/ml

BCA-BGG-1                      Pre-diluted BGG (bovine gamma globulin) standards (1 set: 2000, 1000, 500, 125, 62.5, 31.25, and 0 ng/ml BGG) for BCA Optima Protein Assay kit

BCA-BSA-1                      Pre-diluted BSA (bovine serum albumin) standards (1 set) for BCA Optima Protein Assay kit

BCAG-310 BCA Enhanced Protein Assay kit (96 tests) with dual standards: 1 pre-coated bovine gamma globulin (BGG) standard plate (0-20 ug/ml) & bovine serum albumin (BSA) standard 1 mg/ml

BCAG-810 BCA Ultra Protein Assay kit (96 tests) with dual standards: 1 pre-coated bovine gamma globulin (BGG) standard plate (0-12 ug/ml) & bovine serum albumin (BSA) standard 1 mg/ml

BCAO-521 BCA Optima Protein Assay kit with Pre-diluted BSA standards and BCA Strip plates (5), 500 tests

BCAO-522 BCA Optima Protein Assay kit with Pre-diluted BGG (bovine gamma globulin) standards and BCA Strip plates (5), 500 tests

BCAP-5    BCA Protein Assay Ready to use blank pre-optimized strip plates (5) or BCA Optima Protein Assay

BCA-BSA-750                      160211A

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